Metabolics

How we manufacture the purest, most effective and safest solutions on the market.

These products are all manufactured in our category one sterile metabolic facility located at Dandenong in Melbourne's eastern suburbs. The complete manufacturing process takes close to three weeks and requires the contribution of around 20 trained people at various stages of the process.

We take this process very seriously. We understand that we are dealing with injectable solutions that have to be sterile, otherwise the health implications can be serious for your livestock.
Our injectable solutions are completely endotoxin-free so our solutions aren't pyrogenic.
We guarantee it.

What are endotoxins and pyrogens, and why are they important?

Endotoxins are essentially gram-negative bacteria known as lipopolysaccharide (LPS) or lipooligosaccharide (LOS) and when released into the blood stream or other tissue they can become toxic.

Pyrogens are defined as any substance that can cause a 'fever' - the medical terminology for an elevated body temperature.
In summary if our solutions weren't endotoxin-free then they would be potentially pyrogenic. The adverse effects of a pyrogenic solution are numerous and can have serious adverse effects on your livestock, including:

- Fever or an elevated temperature
- Decrease in blood pressure
- Decrease in white blood cells
- Hemorrhaging
- Necrosis
- Fatality if left untreated.

Inside the new manufacturing facility, Sypharma Melbourne.

How do we guarantee endotoxin free solutions?

Our quality control measures include two major steps to ensure that we deliver the purest solutions on the market that are endotoxin-free.

1. We will only accept and use a specific grade of raw material. Endotoxins are measured in EU's (endotoxin units). Our raw material conforms to a specific, low range of EU's. At this level we can eliminate all traces of endotoxins during the manufacturing process.
2. We test the finished solution using the 'LAL' (Limulus Amebocyte Lysate) testing method. The LAL testing method is incredibly precise compared to other practices commonly used. It uses an aqueous extract of blood cells from the horseshoe crab. The blood cells react with bacteria or endotoxins and from the reaction the quantification of endotoxin levels is known. Essentially, if the blood forms a clot when the solution is added, we know that endotoxins exist within that solution. As such it would not pass our manufacturing requirements.